

**REMARKS**

Claims 15-20 are pending in the present application. Claims 21 and 22 have been canceled.

**Claim Rejections-35 U.S.C. 112**

Claims 15-20 have been rejected under 35 U.S.C. 112, first paragraph, as allegedly failing to comply with the written description requirement. The Examiner has alleged that the specification does not reasonably convey that Applicant had possession of the invention as claimed including a "filter medium having opposite first and second surfaces", and supplying treating liquid "from first and second directions to the opposite first and second surfaces" of the filter medium, as featured in claim 15. Applicant respectfully submits that this rejection is improper for at least the following reasons.

Applicant respectfully submits that support showing possession of a filter medium having opposite first and second surfaces, and supplying of treating liquid from opposite first and second directions to the opposite first and second surfaces of the filter medium, should be clearly evident at least in view of Fig. 2 of the present application. That is, biological filter medium 221 in organic substance degradation tower 220 in Fig. 2 of the present application is shown as having an upper or top surface, and an opposite lower or bottom surface, whereby arrow G is indicative of the direction of gravity. That is, as described on page 12, lines 29-30 of the present application with

respect to Fig. 2, arrow G is the direction of gravity, which is referred to as downside, downward or bottom, and whereby the opposite direction is referred to upside, upward or top. One of routine skill in the art should readily comprehend this.

In greater detail, as described on page 10, lines 22-30 of the present application, the organic substance degradation unit comprises at least carriers which are arranged to be brought into contact with the organic exhaust gas-contacted treating liquid, whereby aquatic microbes (bacteria) are supported on the carrier. Because the aquatic microbes are supported on the carrier, effective contact of the microbes with the treating liquid is achieved.

As further described beginning on page 14, line 24 of the present application with reference to Fig. 2, biological filter medium 221 supports aquatic microbes and is arranged near to an intermediate portion of organic gas absorption tower 220 in the gravitational direction. Nozzle portions of up-flow washing nozzles 234 and sprinkling nozzles 235 are arranged downward in order so as to face close to the downside of biological filter medium 221. Additionally, pipeline 238 is connected to a side surface of organic gas absorption tower 220 above biological filter medium 221, so that treating liquid 260 stored in treating liquid tank 211 is supplied to biological filter medium 221 from the upside. Treating liquid 260 within treating liquid tank 211 is thus supplied by pump 241 to pipeline 232, valve 250 and pipeline 238 to the upper portion of organic substance degradation tower 220 to be applied onto an upper surface of biological filter medium in a downward direction, and treating liquid 260 is also supplied by pump 241

via upflow washing nozzle 234 to the bottom portion of organic substance degradation tower 220 to be applied onto a lower surface of biological filter medium 221 in an upward direction. The opposite upward and downward directions and upper and lower surfaces of biological filter medium 221, should be abundantly clear.

Applicant respectfully submits that the above noted portions of the specification and Fig. 2 clearly demonstrate that Applicant had possession of the above noted features of claim 15. One of ordinary skill would readily understand that these features of claim 15 are reasonably conveyed to show possession of the invention. Accordingly, Applicant respectfully submits that claims 15-20 are in compliance with 35 U.S.C. 112, first paragraph, and thus respectfully urges the Examiner to withdraw this rejection for at least these reasons.

**In the event that this rejection is maintained, the Examiner is respectfully requested to explain on the record how the above noted features of claim 15 could be considered as not described to the extent necessary to show possession.**

Claims 15-20 have been rejected under 35 U.S.C. 112, second paragraph, as being indefinite. The Examiner has asserted that the claim language "from first and second directions to the opposite first and second surfaces" and treating liquid supplied from "first and second directions" to the opposite "first and second surfaces" is unclear. However, Applicant respectfully submits that these features of claim 15 should be readily clear at least in view of Fig. 2 of the present application and the corresponding

portions of the specification as noted above. Applicant therefore respectfully submits that claims 15-20 are in compliance with 35 U.S.C. 112, second paragraph, and thus respectfully urges the Examiner to withdraw this rejection.

**Claim Rejections-35 U.S.C. 103**

Claims 15-22 have been rejected under 35 U.S.C. 103(a) as being unpatentable over the Turschmid et al. reference (U.S. Patent No. 6,013,512) in view of the Eguchi et al. reference (U.S. Patent No. 5,518,620) and the Cruze reference (U.S. Patent No. 5,378,280). This rejection is respectfully traversed for the following reasons.

The method for eliminating a harmful substance from an organic exhaust gas of claim 15 includes in combination among other features "supplying the treating liquid containing the harmful substance to the biological filter medium from opposite first and second directions to the opposite first and second surfaces, so that the harmful substance is biochemically degraded by the bacteria supported by the biological filter medium". Applicant respectfully submits that claim 15 would not have been obvious in view of the prior art as relied upon by the Examiner for at least the following reasons.

The Examiner has acknowledged that the primarily relied upon Turschmid et al. reference does not disclose (1) the use of a filter medium to support the bacteria, and (2) the step of contacting the treated exhaust gas with an active carbon to remove any remaining harmful substance in the treated exhaust gas. In an effort to overcome the deficiency with respect to a filter medium to support bacteria, the Examiner has relied

upon the Eguchi et al. reference which includes formed material 54 of roll type as shown in Figs. 2(A) and 2(B) within cylindrical treatment vessel 8 shown in Fig. 1. The Examiner has asserted that it would have been obvious to provide a support or carrier for microorganisms in the process of the Turschmid et al. reference.

However, as described beginning in column 5, line 37 of the Eguchi et al. reference with respect to Fig. 1, water 4 to be treated is fed by water pump 6 from untreated water vessel 2 to bottom 10 of cylindrical treatment vessel 8. As further described in column 6, lines 21-25 of the Eguchi et al. reference, the treated water having lower organic matter concentration is discharged outside treatment vessel 8 through a second water pipe 18 connected to the top 14 of treatment vessel 8.

Accordingly, as may be readily clear in view of Fig. 1 of the Eguchi et al. reference, the treating liquid is supplied only to a bottom surface of the filter medium enclosed within treatment vessel 8. The Eguchi et al. reference does not disclose or even remotely suggest supplying treating liquid to a biological filter medium from opposite first and second directions to opposite first and second surfaces of the biological filter medium. The Cruze reference as further secondarily relied upon does not overcome this deficiency. The prior art as relied upon does not disclose all the features of claim 15. Applicant therefore respectfully submits that the method for eliminating a harmful substance from an organic exhaust gas of claim 15 would not have been obvious in view of the prior art as relied upon by the Examiner taken singularly or together, and that this rejection of claims 15-20 is improper for at least

these reasons.

### **Conclusion**

The Examiner is respectfully requested to reconsider and withdraw the corresponding rejections, and to pass the claims of the present application to issue, for at least the above reasons.

In the event that there are any outstanding matters remaining in the present application, please contact Andrew J. Telesz, Jr. (Reg. No. 33,581) at (571) 283-0720 in the Washington, D.C. area, to discuss these matters.

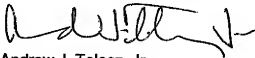
Pursuant to the provisions of 37 C.F.R. 1.17 and 1.136(a), the Applicant hereby petitions for an extension of one (1) month to March 15, 2008, for the period in which to file a response to the outstanding Office Action. The required fee of \$120.00 should be charged to Deposit Account No. 50-0238.

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If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment for any additional fees that may be required, or credit any overpayment, to Deposit Account No. 50-0238.

Respectfully submitted,

VOLENTINE & WHITT, P.L.L.C.

A handwritten signature in black ink, appearing to read 'Andrew J. Telesz, Jr.', with a stylized flourish at the end.

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